

(b) treating the separated oocyst-wall preparation so as to obtain an isolated oocyst wall antigen preparation free from sporozoite antigens capable of eliciting a detectable IgG1 immune response in an animal to the surface of the oocyst;

(c) immunizing an animal with the isolated oocyst wall antigen preparation so as to elicit an IgG1 immune response in the animal; and

(d) obtaining from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

D3 13. (Twice Amended) The method according to claim 9 wherein the treating step (b) comprises physically breaking up the oocyst wall.

D4 22. (Once Amended) The antibody according to claim 20 wherein the IgG1 monoclonal antibody is produced by hybridoma CRY104.

Please add new claims 24-37 as follows:

-24. A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

(a) pretreating *Cryptosporidium* oocysts with a reagent that removes surface layer antigens from the oocysts to form an oocyst surface antigen preparation;

(b) separating the oocysts from the oocyst surface antigen preparation to obtain an isolated oocyst surface antigen preparation free from sporozoite antigens;

(c) immunizing an animal with the isolated oocyst surface antigen preparation so as to elicit an IgG1 immune response in the animal; and

(d) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

D5 25. The method according to claim 24 wherein the reagent is a detergent.

26. The method according to claim 25 wherein the detergent is sodium dodecyl sulphate (SDS).

27. The method according to claim 26 wherein the pretreating comprises boiling the oocysts in the presence of SDS to generate the oocyst surface antigen preparation.

28. The method according to claim 27 wherein the boiling of the oocyst is for at least one (1) hour in the presence of 0.5% (w/v) SDS.

29. The method according to claim 24 wherein the reagent is selected from the group consisting of urea, detergents, including Triton X-100 and nonident, enzymes, including chitinase, oxidising agents, including sodium hypochlorite, sodium periodate, and ozone; and reducing agents including mercaptol ethanol and 1,1,1-trichloro-2,2-bis(4-chlorophenyl)ethane.

30. The method according to claim 24 wherein the preparation of step (c) further includes one or more adjuvants.

~~31.~~ A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

- (a) separating the *Cryptosporidium* oocyst wall from internal sporozoites to form an oocyst-wall preparation free from sporozoite antigens;
- (b) immunizing an animal with the oocyst-wall preparation so as to elicit an IgG1 immune response in the animal; and
- (c) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts.

32. The method according to claim 31 wherein the separation of the oocyst wall from the internal sporozoites comprises inducing the oocyst to excyst followed by separation of the oocyst wall components from the released sporozoites.

33. The method according to claim 32 wherein the separation of the oocyst wall component from the released sporozoite comprises means selected from the group consisting of immuno-separation, centrifugation, flow cytometry, density gradient separation, precipitation, immuno-labelling, ligand-binding, biotin-labelling with separation by avidin, and chromatographic separation.

34. The method according to claim 32 wherein inducing the oocyst to excyst comprises freeze-thawing or physically breaking up by crushing, sonication or grinding the oocyst.

35. The method according to claim 31 wherein the treating step (b) comprises physically breaking up the oocyst wall.

36. The method according to claim 31 wherein the oocyst wall antigen preparation in step (c) further comprises one or more adjuvants.

*37.* A method of producing isolated IgG1 subclass antibodies reactive to the surface of *Cryptosporidium* oocysts, the method comprising:

(a) separating the *Cryptosporidium* oocyst wall from internal sporozoites to form an oocyst wall preparation free from sporozoite antigens;

(b) treating the separated oocyst wall preparation to obtain an isolated oocyst wall antigen preparation free from sporozoite antigens;

(c) immunizing an animal with the oocyst wall antigen preparation to elicit an IgG1 immune response in the animal; and

(d) recovering from the animal IgG1 antibodies reactive to the surface of *Cryptosporidium* oocysts--